

Chapter 2 Review Worksheet

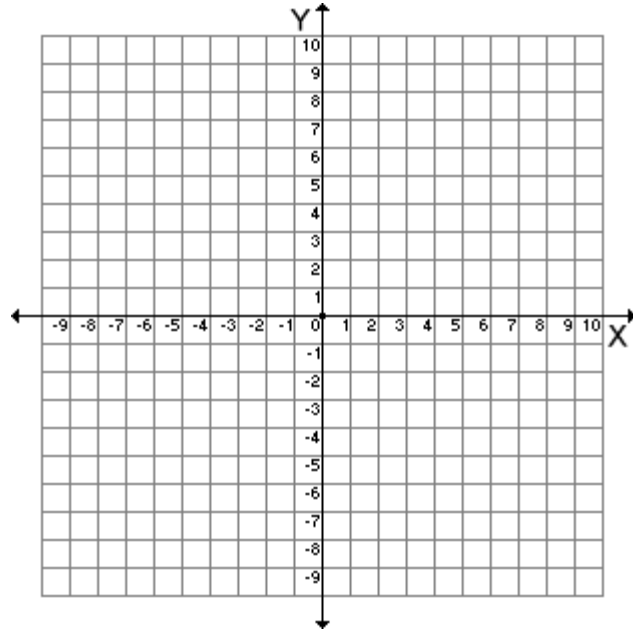
Name: _____

- 1) $f(x) = 7x + 10$. Find:
 - a. the y-intercept
 - b. the x-intercept
 - c. the slope
- 2) Find the equation of the line that passes through (10, 7), (12, 15).
- 3) Find the x- and y- intercepts of:
 - a. $2x + 6y = 12$
 - b. $y = 2x - 1$.
- 4) Write equations that satisfy the stated conditions:
 - a. A line parallel to $y = 5x - 2$
 - b. A line perpendicular to $y = \frac{3}{7}x + 10$
- 5) The area of a rectangle with a fixed width varies directly with its length. A given rectangle has an area of 100 in^2 and a length of 5 in. Another rectangle has the same width as the first rectangle, but its length is 20 in. Find the area of the second rectangle.
- 6) Solve algebraically.
 - a. $2x - 10 = 22$
 - b. $2(x - 5) = 10$
- 7) Solve the following. Write your answer in *interval notation*.
 - a. $3x - 3 > 13$
 - b. $2(x - 1) < 8$

8) Use $f(x)$ to complete the following:

$$f(x) = \begin{cases} x+1 & \text{if } x < -4 \\ x-3 & \text{if } -4 \leq x < 2 \\ 5 & \text{if } x \geq 2 \end{cases}$$

- Evaluate f at $x = -6, -2, 0,$ and 4 .
- Sketch the graph of f .
- Determine x values where $f(x) = 0$.



9) Solve each equation:

a. $|2x-1|=7$

b. $|1/2x-1|=5$

10) Solve each inequality:

a. $|x-2| > 14$

b. $|4x+1| < 9$